

IN THE CLAIMS

1. (Currently Amended) Device for hot dip coating a metal strand (1), especially a steel strip, in which the metal strand (1) is passed vertically through a coating tank (3) that contains the molten coating metal (2) and through a guide channel (4) upstream of the coating tank, with at least two inductors (5) installed on both sides of the metal strand (1) in the area of the guide channel (4) for generating an electromagnetic field in order to keep the coating metal (2) in the coating tank (3) and with at least one sensor (6, 6') for determining the position (s) of the metal strand (1) in the area of the guide channel (4), ~~characterized by the fact that wherein~~ the sensor for determining the position of the metal strand (1) consists of two coils (6, 6'), which are installed, as viewed in the direction of conveyance (R) of the metal strand (1), within the height (H_0) of the inductors (5) and between the inductors (5) and the metal strand (1).

2. (Currently Amended) Device in accordance with Claim 1, ~~characterized by the fact that wherein~~ the coils (6, 6') and the inductors (5) are arranged symmetrically with respect to the center plane (7) of the guide channel (4).

3. (Currently Amended) Device in accordance with ~~Claim 1 or Claim 2~~, characterized by the fact that Claim 1, wherein the coils (6, 6') are the same and are designed as wire windings without a core.

4. (Currently Amended) Device in accordance with Claim 3, ~~characterized by the fact that~~ wherein the coils (6, 6') have one or more windings.

5. (Currently Amended) Device in accordance with ~~Claim 3 or 4~~, ~~characterized by the fact that~~ Claim 3, wherein the wire of the coils (6, 6') is made of copper.

6. (Currently Amended) Device in accordance with ~~any of Claims 3 to 5~~, characterized by the fact that Claim 3, wherein the windings of the coils have a circular, oval or rectangular shape.

7. (Currently Amended) Device in accordance with ~~any of Claims 1 to 6~~, characterized by the fact that Claim 1, wherein the coils (6, 6') are connected to a measuring device (8) for measuring the voltages (U_{Ind1} , U_{Ind2}) induced in the coils (6, 6').

8. (Currently Amended) Device in accordance with Claim 7,
~~characterized by the fact that~~ wherein the measuring device (8) is
designed for the high-impedance measurement of the voltages (U_{Ind1} ,
 U_{Ind2}) induced in the coils (6, 6').

9. (Currently Amended) Device in accordance with ~~Claim 7 or~~
~~Claim 8,~~ characterized by the fact that Claim 7, wherein the
measuring device (8) has a subtractor (9), with which the difference
(U_{Ind}) of the two voltages (U_{Ind1} , U_{Ind2}) induced in the coils (6, 6')
can be determined.

10. (Currently Amended) Device in accordance with ~~any of Claims~~
~~1 to 9,~~ characterized by the fact that Claim 1, wherein several pairs
of coils (6, 6') are installed, as viewed in the direction of
conveyance (R) of the metal strand (1), within the height (H_0) of the
inductors (5) and between the inductors (5) and the metal strand (1).

11. (Currently Amended) Method for hot dip coating a metal
strand (1), especially a steel strip, in which the metal strand (1)
is passed vertically through a coating tank (3) that contains the
molten coating metal (2) and through a guide channel (4) upstream of
the coating tank; in which an electromagnetic field is generated by
at least two inductors (5) installed on both sides of the metal
strand (1) in the area of the guide channel (4) in order to keep the

coating metal (2) in the coating tank (3); and in which the position (s) of the metal strand (1) in the area of the guide channel (4) is determined with at least one sensor (6, 6'), ~~characterized by the fact that~~ wherein to determine the position of the metal strand (1), two coils (6, 6') are provided, which are installed, as viewed in the direction of conveyance (R) of the metal strand (1), within the height (H_0) of the inductors (5) and between the inductors (5) and the metal strand (1), and the voltages (U_{Ind1} , U_{Ind2}) induced in the coils (6, 6') are measured, the difference between the measured voltages is taken, and the resulting value is used to derive an indicator for the position of the metal strand (1).